Fancyhdr

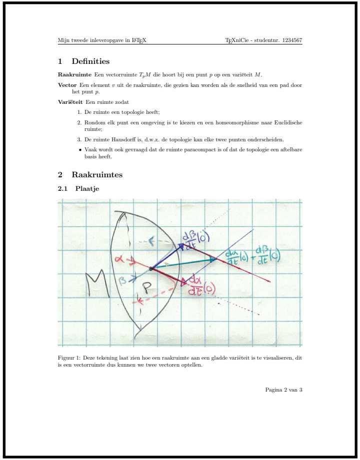
document/document-fancyhdr

```latex
\documentclass[a4paper]{article}
\usepackage[utf8]{inputenc}
\usepackage[margin=2.54cm]{geometry}
\usepackage{fancyhdr}
\pagestyle{fancy}

\title{My document}
\author{Vincent Kuhlmann}
\date{1 May 2021}

\begin{document}
    \maketitle
    \section{Introduction}

    Hello everyone!
\end{document}
```



Mijn tweede inleveropgave in LaTeX — TeXniCie - studentnr. 1234567

1 Definities

Raakruimte Een vectorruimte T_pM die hoort bij een punt p op een variëteit M.

Vector Een element v uit de raakruimte, die gezien kan worden als de snelheid van een pad door het punt p.

Variëteit Een ruimte zodat

1. De ruimte een topologie heeft;
2. Rondom elk punt een omgeving is te kiezen en een homeomorphisme naar Euclidische ruimte;
3. De ruimte Hausdorff is, d.w.z. de topologie kan elke twee punten onderscheiden.

- Vaak wordt ook gevraagd dat de ruimte paracompact is of dat de topologie een aftelbare basis heeft.

2 Raakruimtes

2.1 Plaatje

Figuur 1: Deze tekening laat zien hoe een raakruimte aan een gladde variëteit is te visualiseren, dit is een vectorruimte dus kunnen we twee vectoren optellen.

Pagina 2 van 3

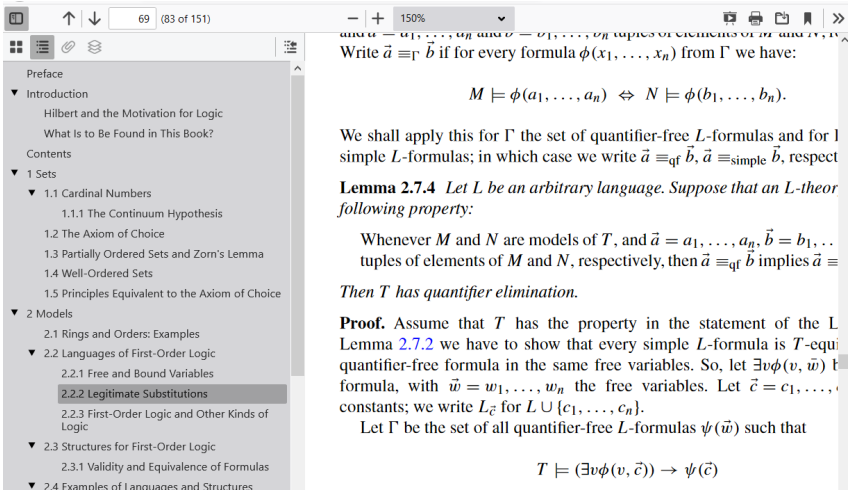
Pagina lay-out en dimensies

document/document-geometry-fancyhdr


```
\usepackage{geometry}
\usepackage{fancyhdr}

\geometry{
    a6paper,
    landscape,
    margin=2cm,
    left=1cm,
    paperheight=12cm
}
\pagestyle{fancy}
\fancyhead[L]{Linksboven!}
```

Vincents favorite package: `\usepackage[bookmarksn` document/document-hyperref



Standalone

document/document-latex-to-svg

```
% Bestand: prachtigeformule.tex
\documentclass{standalone}
\usepackage{amsmath,amssymb}

\begin{document}
    $\displaystyle\sum_{k=0}^{\infty}
    \frac{x^k}{k!}=e^{x}$
\end{document}
```

```
\includegraphics[...]{prachtigeformule.pdf}
```

$$\sum_{k=0}^{\infty} \frac{x^k}{k!} = e^x$$

Raster vs vector graphics

document/document-latex-to-svg

Raster (.png, .jpg, .jpeg, .bmp)

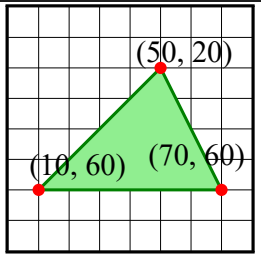
Vector (.pdf, .svg, .dvi, .ps)

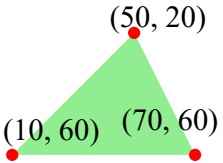
Raster vs vector graphics

document/document-latex-to-svg

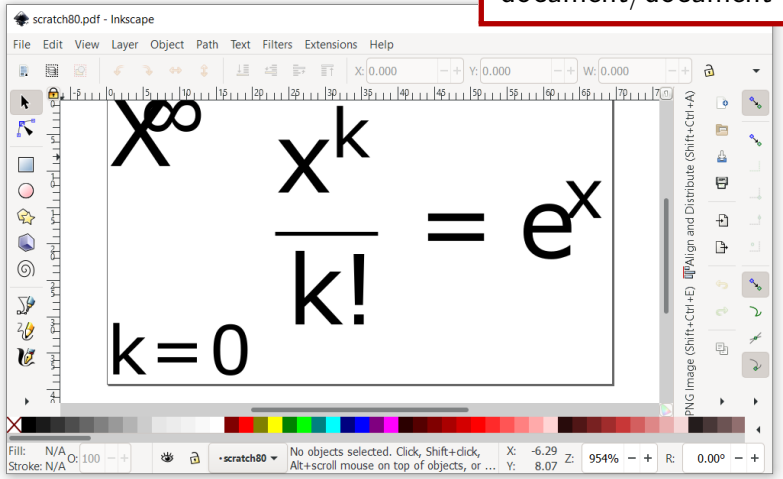
assets > images > vector_vs_raster-vector.svg

```svg
<svg version="1.1"
    width="80" height="80"
    xmlns="http://www.w3.org/2000/svg">
    <path d="M50 20 L70 60 L10 60 Z" fill="lightgreen" />
</svg>
```

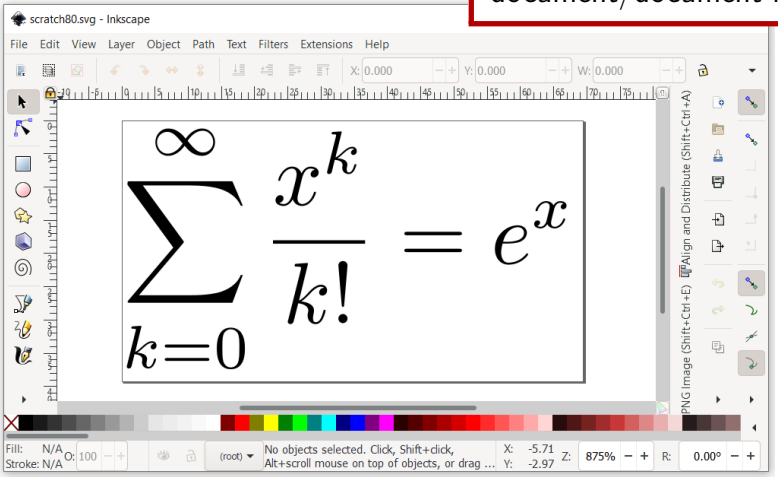




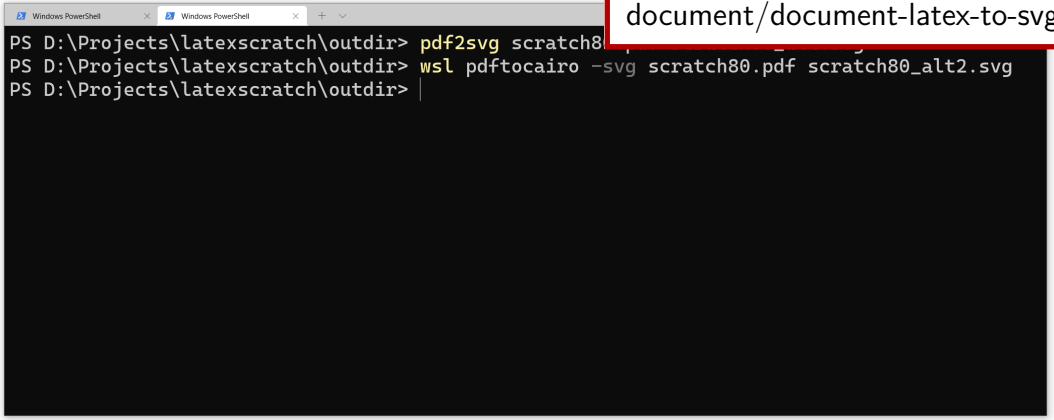
document/document-latex-to-svg



document/document-latex-to-svg



document/document-latex-to-svg



Converteren van pdf naar svg met `pdf2svg` of met package `pdftocairo`. Voor laatste is Linux/Mac nodig of Windows Subsystem for Linux.

```
pdf2svg scratch80.pdf scratch80_alt.svg
wsl pdftocairo -svg scratch80.pdf scratch80_alt2.svg
```

Converteren van pdf naar svg met `pdf2svg` of met package `pdftocairo`. Voor laatste is Linux/Mac nodig of Windows Subsystem for Linux.

document/document-latex-to-svg

4.1.4 1-forms as $C^\infty(M)$-linear functionals eating vector fields

While covectors of a vector space V take vectors to real numbers, 1-forms take vector
given ω as above and $X \in \mathfrak{X}(M)$, evaluating ω_p on X_p for each $p \in M$ we obtain a smc

$$\omega(X) \in \mathscr{C}^\infty(M);$$

(why smooth?). When we vary X it is clear that the resulting map, still denoted by ω,

$$\omega : \mathfrak{X}(M) \to \mathscr{C}^\infty(M)$$

is $C^\infty(M)$-linear, i.e. it is linear and

$$\omega(f \cdot X) = f \cdot \omega(X) \quad \text{for all } f \in \mathscr{C}^\infty(M), X \in \mathfrak{X}(M).$$

document/document-latex-to-svg

4.1.4 1-forms as $C^\infty(M)$-linear functionals eating vector fields

While covectors of a vector space V take vectors to real numbers, 1-forms take vecto
given ω as above and $X \in \mathfrak{X}(M)$, evaluating ω_p on X_p for each $p \in M$ we obtain a smo

$$\omega(X) \in \mathscr{C}^\infty(M);$$

(why smooth?). When we vary X it is clear that the resulting map, still denoted by ω,

$$\omega : \mathfrak{X}(M) \to \mathscr{C}^\infty(M)$$

is $C^\infty(M)$-linear, i.e. it is linear and

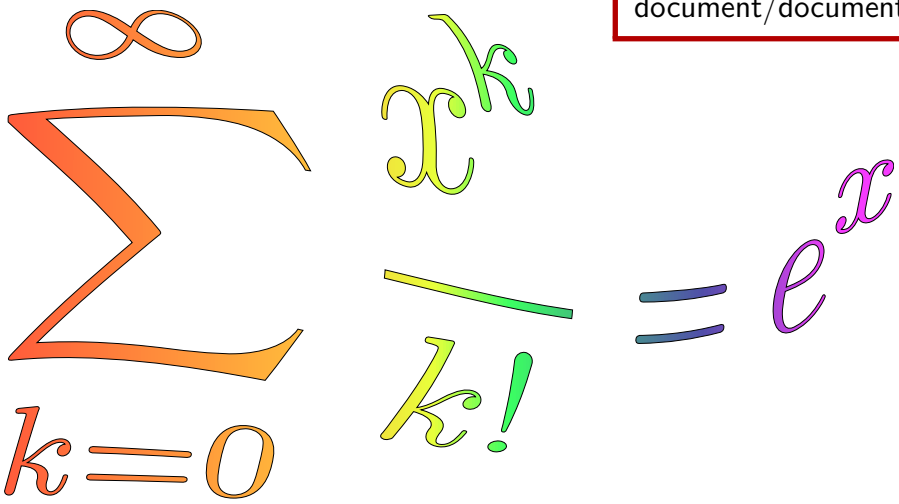
$$\omega(f \cdot X) = f \cdot \omega(X) \quad \text{for all } f \in \mathscr{C}^\infty(M), X \in \mathfrak{X}(M).$$

4.1.4 1-forms as $C^\infty(M)$-linear functionals eating vector fields

document/document-latex-to-svg

$$\sum_{k=0}^{\infty} \frac{x^k}{k!} = e^x$$

document/document-latex-to-svg



Page margins

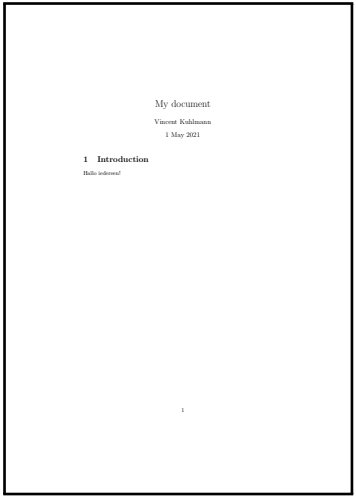
document/document-margins

```
\documentclass{article}
\usepackage[utf8]{inputenc}

\title{My document}
\author{Vincent Kuhlmann}
\date{1 May 2021}

\begin{document}
    \maketitle
    \section{Introduction}

    Hello everyone!
\end{document}
```



Page margins

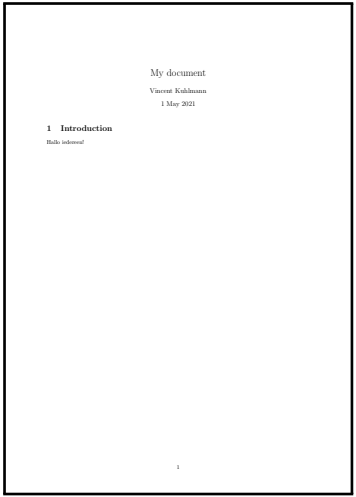
document/document-margins

```
\documentclass[a4paper]{article}
\usepackage[utf8]{inputenc}
\usepackage[margin=2.54cm]{geometry}

\title{My document}
\author{Vincent Kuhlmann}
\date{1 May 2021}

\begin{document}
    \maketitle
    \section{Introduction}

    Hello everyone!
\end{document}
```



Page margins

document/document-margins

```
\documentclass[a4paper]{article}
\usepackage[utf8]{inputenc}
\usepackage[margin=2.54cm,left=-0.5cm]
{geometry}

\title{My document}
\author{Vincent Kuhlmann}
\date{1 May 2021}

\begin{document}
    \maketitle
    \section{Introduction}

    Hello everyone!
\end{document}
```

Simple document

document/document-parts

```
\documentclass{article}

\usepackage[utf8]{inputenc}

\title{My document}
\author{Vincent Kuhlmann}
\date{1 May 2021}
```

Preamble

```
\begin{document}
\maketitle
\section{Introduction}

Hello everyone!
\end{document}
```

Document

My document

Vincent Kuhlmann

1 May 2021

1 Introduction

Hallo iedereen!

Partial numbering

document/document-secnumdepth

```
\setcounter{secnumdepth}{3}
\section{AA}
Lorem ipsum dolor sit amet,
consectetur adipiscing elit.

\section{BB}
\subsection{CC}
\subsubsection{DD}
\subsection{EE}
Nullam a risus at arcu
lobortis viverra vel
volutpat diam.

\section{FF}
\subsubsection{GG}
```

1 AA

Lorem ipsum dolor sit amet, consectetur adipiscing elit.

2 BB

2.1 CC

2.1.1 DD

2.2 EE

Nullam a risus at arcu lobortis viverra vel volutpat diam.

3 FF

3.0.1 GG

Partial numbering

document/document-secnumdepth

```
\setcounter{secnumdepth}{2}
\section{AA}
Lorem ipsum dolor sit amet,
consectetur adipiscing elit.

\section{BB}
\subsection{CC}
\subsubsection{DD}
\subsection{EE}
Nullam a risus at arcu
lobortis viverra vel
volutpat diam.

\section{FF}
\subsubsection{GG}
```

1 AA

Lorem ipsum dolor sit amet, consectetur adipiscing elit.

2 BB

2.1 CC

DD

2.2 EE

Nullam a risus at arcu lobortis viverra vel volutpat diam.

3 FF

GG

Partial numbering

document/document-secnumdepth

```
\setcounter{secnumdepth}{1}
\section{AA}
Lorem ipsum dolor sit amet,
consectetur adipiscing elit.

\section{BB}
\subsection{CC}
\subsubsection{DD}
\subsection{EE}
Nullam a risus at arcu
lobortis viverra vel
volutpat diam.

\section{FF}
\subsubsection{GG}
```

1 AA

Lorem ipsum dolor sit amet, consectetur adipiscing elit.

2 BB

CC

DD

EE

Nullam a risus at arcu lobortis viverra vel volutpat diam.

3 FF

GG

Partial numbering

document/document-secnumdepth

```
\setcounter{secnumdepth}{0}
\section{AA}
Lorem ipsum dolor sit amet,
consectetur adipiscing elit.

\section{BB}
\subsection{CC}
\subsubsection{DD}
\subsection{EE}
Nullam a risus at arcu
lobortis viverra vel
volutpat diam.

\section{FF}
\subsubsection{GG}
```

AA

Lorem ipsum dolor sit amet, consectetur adipiscing elit.

BB

CC

DD

EE

Nullam a risus at arcu lobortis viverra vel volutpat diam.

FF

GG

Section commands

document/document-sections

```
\section{AA}
Lorem ipsum dolor sit amet,
consectetur adipiscing elit.

\section{BB}
\subsection{CC}
\subsubsection{DD}
\subsection{EE}
Nullam a risus at arcu
lobortis viverra vel
volutpat diam.

\section{FF}
\subsubsection{GG}
```

1 AA

Lorem ipsum dolor sit amet, consectetur adipiscing elit.

2 BB

2.1 CC

2.1.1 DD

2.2 EE

Nullam a risus at arcu lobortis viverra vel volutpat diam.

3 FF

3.0.1 GG

Partial numbering

document/document-section-star

```
\section{AA}
Lorem ipsum dolor sit amet,
consectetur adipiscing elit.

\section*{BB}
\subsection*{CC}
\subsubsection{DD}
\subsection*{EE}
Nullam a risus at arcu
lobortis viverra vel
volutpat diam.

\section{FF}
\subsubsection{GG}
```

1 AA

Lorem ipsum dolor sit amet, consectetur adipiscing elit.

BB

CC

1.0.1 DD

EE

Nullam a risus at arcu lobortis viverra vel volutpat diam.

2 FF

2.0.1 GG

Subfiles

document/document-subfiles

```
thesis.tex
section1.tex
section2.tex
...
```

```
% File: section1.tex
% !TEX root=section1.tex
\documentclass
    [thesis.tex]{subfiles}
\begin{document}
    \section{Section 1}
    ...
\end{document}
```

```
% File: thesis.tex
\documentclass
    [a4paper]{article}
\usepackage{subfiles}

\begin{document}
    ...
    \subfile{section1.tex}
    \subfile{section2.tex}
\end{document}
```

Contents

document/document-toc

```
\begin{document}
    \maketitle
    \tableofcontents

    \section{AA}
    ...
\end{document}
```

Contents

1 AA

Lorem ipsum dolor sit amet, consectetur adipiscing elit.

Contents

document/document-toc

```
\begin{document}
    \maketitle
    \tableofcontents
    \newpage

    \section{AA}
    ...
\end{document}
```

Contents

Contents

document/document-toc

```
...
\usepackage[dutch]{babel}

\begin{document}
    \maketitle
    \tableofcontents
    \newpage

    \section{AA}
    ...
\end{document}
```

Inhoudsopgave

twocolumn

document/document-twocolumn

Nunc feugiat purus lorem, in pulvinar leo accumsan quis. Maecenas tristique sollicitudin venenatis. Phasellus imperdiet urna quis augue ornare condimentum. Cras euismod nisi convallis ipsum ultricies aliquet. Suspendisse accumsan vulputate accumsan. Aliquam vehicula sapien quis egestas venenatis. Nam suscipit imperdiet eros eget finibus. Interdum et malesuada fames ac ante ipsum primis in faucibus. Quisque porta ultricies eros nec potas. Cras a convallis mi, a finibus felis. Nunc quis nisi non magna tincidunt tincidunt. Maecenas cursus, velit non dapibus gravida, quam dui condimentum leo, ac egestas tellus sem a est. Pellentesque convallis sollicitudin commodo. Nulla non viverra sapien.

Etiam sit amet neque rutrum, semper ex et, vehicula diam. Aliquam iaculis dignissim accumsan. Integer vel suscipit ligula, at efficitur nulla. Proin iaculis quam at

```
\documentclass[a4paper,twocolumn]{article}
\usepackage[margin=2.54cm]{geometry}
\usepackage{fancyhdr}
\pagestyle{fancy}
```